

### Dotted Decimal:

1. 255.255.254.0

1111 1111.1111 1111.1111 1110.0000 0000

/23

$$2^9=512$$

$$512 - 2 = 510 \text{ Total Hosts}$$

2. 255.192.0.0

1111 1111. 1100 0000.0000 0000.0000 0000

/10

$$2^{22}= 4,194,304$$

$$4,194,304-2 = 4,194,302 \text{ Total Hosts}$$

3. 255.255.255.240

1111 1111.1111 1111.1111 1111.1111 0000

/28

$$2^4 = 16$$

$$16-2 = 14 \text{ total Hosts}$$

4. 255.255.224.0

1111 1111.1111 1111.1110 0000.0000 0000

/19

$$2^{13} = 4096$$

$$4096 - 2 = 4094 \text{ Total Hosts}$$

5. 255.255.255.192

1111 1111.1111 1111.1111 1111.1100 0000

/26

$$2^6 = 64$$

$$64-2= 62 \text{ Total Hosts}$$

CIDR:

6. /12

$$/32 - /12 = 20$$

$$2^{20} = 1,048,576$$

$$1,048,576 - 2 = 1,048,574 \text{ total Hosts}$$

7. /30

$$/32 - /30 = 2$$

$$2^2 = 4$$

$$4 - 2 = 2 \text{ Total Hosts}$$

8. /15

$$/32 - /15 = 17$$

$$2^{17} = 131,072$$

$$131,072 - 2 = 131,070 \text{ Total Hosts}$$

9. /22

$$/32 - /22 = 10$$

$$2^{10} = 1,024$$

$$1,024 - 2 = 1,022 \text{ total Hosts}$$

10. /9

$$/32 - /9 = 23$$

$$2^{23} = 8,388,608$$

$$8,388,608 - 2 = 8,388,606 \text{ Total Hosts}$$